

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-20. (Cancelled)

Claim 21. (Currently Amended) The sensor device of claim ~~20~~ 48, wherein the separation barrier separates the interior of the sensor compartment from a primary container.

Claim 22. (Currently Amended) The sensor device of claim ~~20~~ 48, wherein the at least one pore which allows fluid communication between the interior and exterior of the sensor compartment is occluded with a responsive material.

Claim 23. (Previously Presented) The sensor device of claim 22, wherein the responsive material is selected from the group consisting of cellulosics, non-cellulosic non-protein polymers, protein polymers, lipid bilayers, and lipid-containing composites.

Claim 24. (Previously Presented) The sensor device of claim 22, wherein the responsive material exhibits a response selected from the group consisting of eroding, dissolving, and changing three-dimensional form.

Claim 25. (Previously Presented) The sensor device of claim 24, wherein the response results from a change selected from the group consisting of a change in solvent concentration, a change in pH, a change in temperature, bacterial action, endotoxin action, enzymatic action, and contact with water.

Claim 26. (Cancelled)

Claim 27. (Currently Amended) The sensor device of claim ~~20~~ 48, wherein the sensor compartment has walls comprised of an opaque material.

Claims 28-29. (Cancelled)

Claim 30. (Currently Amended) The sensor device of claim ~~29~~ 48, wherein the bioactive detector molecule and signal material are a fluorescent receptor complex.

Claim 31. (Currently Amended) The sensor device of claim ~~29~~ 48, wherein the bioactive detector molecule and signal material are a fluorochrome-receptor complex.

Claims 32-35. (Cancelled)

Claim 36. (Currently Amended) The sensor device of claim ~~21~~ 48, wherein the primary container is closed for analysis.

Claim 37. (Currently Amended) The sensor device of claim ~~20~~ 48, wherein the device is capable of aseptic operation.

Claim 38. (Currently Amended) The sensor device of claim ~~20~~ 48, wherein the external sensing is remote sensing.

Claim 39-47. (Cancelled)

Claim 48. (Previously Presented) A sensor device, comprising:
a biosensor comprising a receptor bound on a solid substrate;
a sensor compartment having an interior and an exterior, and enclosing the biosensor, the sensor compartment having a surface allowing external viewing of the biosensor; and

a separation barrier forming at least a portion of the sensor compartment, the separation barrier being selected from the group consisting of a fibril membrane, a microporous membrane and a capillary-pore membrane, the separation barrier having at least one pore allowing fluid communication between the interior and the exterior of the sensor compartment, wherein the biosensor further comprises a detector molecule and signal material wherein the detector molecule and signal material are selected from the group consisting of a) a combination of a first fluorescent receptor and a second fluorescent receptor, the second fluorescent receptor emitting detectable light of a unique wavelength on excitation by fluorescent resonance transfer by the first fluorescent receptor; b) a combination of a first receptor and a second receptor, the first receptor binding a cell and the second

receptor undergoing a detectable spectral change in response to material released by the cell bound to the first receptor; c) a combination of two inhibited fluorescent groups linked by an enzymatic cleavage site, and wherein enzymatic action cleaves the enzymatic cleavage site and releases the fluorescent inhibition; and d) a combination of a first receptor and a second receptor, the first receptor binding a cell capable of releasing an enzyme and the second receptor being an inhibited fluorescent group wherein the enzyme releases the fluorescent inhibition.

Claim 49. (Previously Presented) A sensor device, comprising:
a biosensor comprising a receptor bound on a solid substrate;
a sensor compartment having an interior and an exterior, and enclosing the biosensor, the sensor compartment having a surface allowing external viewing of the biosensor; and
a separation barrier forming at least a portion of the sensor compartment, the separation barrier being selected from the group consisting of a fibril membrane, a microporous membrane and a capillary-pore membrane, the separation barrier having at least one pore allowing fluid communication between the interior and the exterior of the sensor compartment, wherein the biosensor further comprises a bioactive detector molecule and signal material wherein the bioactive detector molecule and signal material are selected from the group consisting of a) a combination of a first fluorescent receptor and a second fluorescent receptor, the second fluorescent receptor emitting detectable light of a unique wavelength on excitation by fluorescent resonance transfer by the first fluorescent receptor; b) a combination of a first receptor and a second receptor, the first receptor binding a cell and the second receptor undergoing a detectable spectral change in response to material released by the cell bound to the first receptor; c) a combination of two inhibited fluorescent groups linked by an enzymatic cleavage site, and wherein enzymatic action cleaves the enzymatic cleavage site and releases the fluorescent inhibition; d) a combination of a first receptor and a second receptor, the first receptor binding a cell capable of releasing an enzyme and the second receptor being an inhibited fluorescent group wherein the enzyme releases the fluorescent inhibition; and e) a receptor that binds a material, such that upon binding the material, spectral features of the receptor are altered.